Document number:	E029_CT002 rev. 9
Dated:	25-Nov-24
Expiry date:	25-Nov-26

IEC 61508 Functional Safety Capability Statement

Hochiki Europe (UK) Ltd CHQ-ISM and CHQ-ISM/DIN Intrinsically Safe Sounder Module

Manufacturer:	Hochiki Europe (UK) Ltd Gillingham Business Park, Grosvenor Rd, Gillingham ME8 0SA
Product:	Intrinsically Safe Sounder Module
Model:	CHQ-ISM, CHQ-ISM/DIN, CHQ-ISM/SIL, CHQ-ISM/DIN/SIL
Application:	Low Demand Mode Safety Instrumented Function
Safety Function:	Upon detection of driver sounder output failure when demanded, action is initiated via the Intrinsically Safe Sounder Module (Sensing, logic solver and final element subsystems not part of this analysis)
Applied standard:	IEC 61508 Ed2 2010 Parts 1-3
Systematic Capability:	Not Assessed
Applicable report:	Environmental Resources Management Ltd Report: E029_SV002 rev. 6
Assessment Route:	1_H
Hardware Fault Tolerance:	0
Type:	A
Application restrictions:	None

Model No.	λ (/hr)	λDU (/hr)	λDD (/hr)	λS (/hr)	SFF
CHQ-ISM	1.4E-07	5.0E-08	7.9E-08	9.0E-09	63%

IMPORTANT: It should be noted that this assessment considers only the Hochiki Europe (UK) Ltd, CHQ-ISM and CHQ-ISM/DIN Intrinsically Safe Sounder Module. It does not cover opening and closing time requirements and a random hardware failures assessment must be conducted for the entire safety function for each application as per the appropriate Safety Requirements Specification.

The Hochiki Europe (UK) Ltd, CHQ-ISM and CHQ-ISM/DIN Intrinsically Safe Sounder Module has been assessed and is considered capable for use in a low demand mode safety function up to (and including) SIL 2 with regards to random hardware failures and architectural constraints.

Note 1: The SIL of a complete SIF (sensor, logic solver and final element subsystems) must be verified to calculate the required Probability of Failure on Demand (PFD) / Probability of Failure per Hour (PFH), considering any redundancy, Proof Test Interval (PTI), Proof Test Coverage (PTC), Mission Time and Mean Time To Restoration (MTTR) for all elements included in the SIF. Each subsystem should be verified to ensure compliance with the minimum HFT requirements.

© Copyright 2024 by The ERM International Group Limited and/or its affiliates ('ERM'). All Rights Reserved.

Note 2: The CHQ-ISM Module is not itself an intrinsically safe device but is designed to connect to intrinsically safe barriers.

Chantal Sealey FS Eng (TÜV Rheinland) Assessor chantal.sealey@erm.com	Simon Burwood FS Expert (TÜV Rheinland) Assessment Authority simon.burwood@erm.com